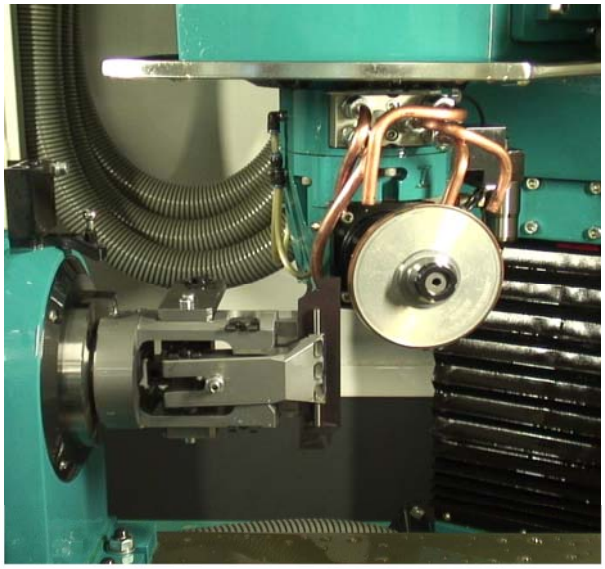
Application Data Sheet

SCHNEEBERGER

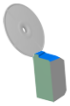
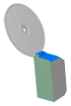
Prism Blade Production

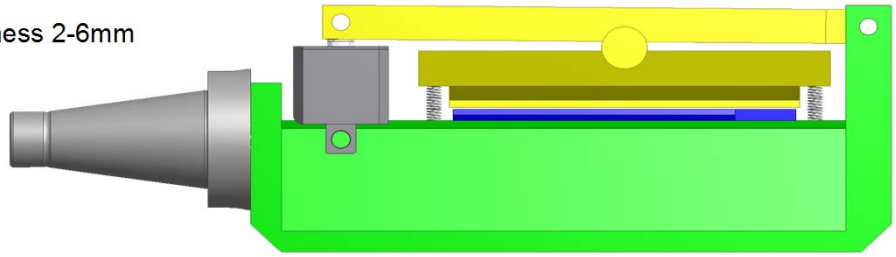
A30-200

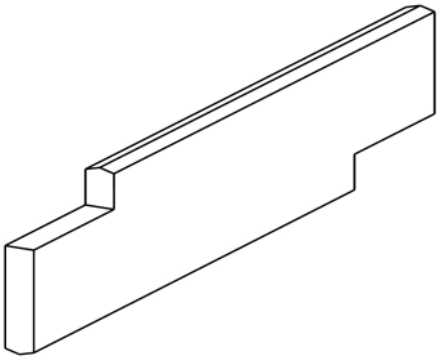


Prism is orientated in vertical position. 1A1 grinding wheel grinds first chamfer from up to down with clearance parallel to grinding path. Movement of grinding is in two axis to avoid marks on the clearance surface and to achieve Ra 0.8.
At lowest point machine moves in X to safety distance, rotates C-Axis parallel to second chamfer, changes sense of rotation of grinding spindle and grinds second chamfer from down to up.
In the present set-up, without the special fixturing, rotation by hand is needed to grind second side. For the final clamping system the process would continue grinding on second side. After grinding is done on second side, robot would change ground tool to next blank tool in one run.

1. Cycletime for Production

Workpiece: Length 150mm, Chamfer 15°, plate thickness 2-6mm Material HSS		
Operations	 first side	 second side
Feed [mm/Min]	800	800
Power [kW]	5	5
Cutting speed [m/s]	24	24
Used wheels	 1	 1
Grinding time [s]	25	25
Total cycle time	0 Min 50 Sec	

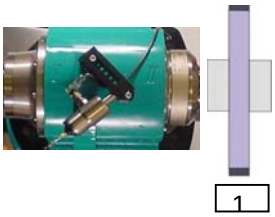




The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	1A1 Ø125 B107



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3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG
Control: Fanuc 31i
Accessories:

Coolant: Synthetic Oil, pressure 6 bar
Software: Quinto 5

Responsible engineer: KIG 05.09.2013

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TECHNOLOGY FOR TOOLING